shift the wavelength to beyond the absorption edge of silicon without increasing the laser pulse width. --

Replace the paragraph beginning at page 20, line 27 with the following rewritten paragraph:

-- Let us examine the laser aspects that make up the single pass gain. It is dependent upon the power density of the light source used to "pump" the laser, the efficiency of conversion of this power to useful laser output, and the material characteristics of the lasing medium. The relationship is given as follows:

$$\text{Gain} = EP/[I_{sat}(A_{pump}+A_{mode})]$$

where E is the efficiency of conversion of pump light to laser output, P is the pump power (i.e., the effective power delivered by the laser diode), I_{sat} is a material parameter dependent on the laser material and its doping, A_{pump} is the cross-sectional area covered by the pump beam in the laser rod, and A_{mode} is the cross-sectional area of the laser mode within the laser rod. --

Replace the paragraph beginning at page 24, line 25 with the following rewritten paragraph:

-- Fig. 9 shows the pulse width for the three different materials as a function of repetition rate. Not only does the YVO_4 (vanadate) have the shortest pulse width, but it maintains this pulse width over a very wide range. --

<u>In the claims</u>:

Cancel claims 1-56.

Add claims 57-87:

-- 57. A laser-based method of vaporizing and removing a target link structure on a semiconductor wafer comprising the steps of: